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The Structure and Functions of the Library in the Hospital.

Hospital Library Resources, Part 1. Services and Manpower in Ohio.

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The Structure and Functions of the Library in the Hospital*

Part 1. Hospital Library Resources, Services and Manpower in Ohio

"The Medical Library in a hospital is not a luxury, but a necessity. It is needed by the administration, by the visiting staff, by the resident staff, and by the nurses, as well as by students attending clinics. Each one of this army of professional people is working toward two great objects—the alleviation of suffering, and far beyond that, the prevention of disease...here is the opportunity of the hospital library. These men and women must study constantly, and along every line they need the assistance of books and the librarian."

Grace Whiting Myers, "Medical Libraries for Modern Hospitals," Modern Hospital, Vol. 5, No. 5, November 1915, p. 341.

I. Introduction

The urgency of upgrading medical libraries in hospitals has been dramatized in recent years by the development of the Regional Medical Library Program of the National Library of Medicine and the Regional Medical Program of the National Institutes of Health. The success of these programs necessitates the active participation of hospital libraries. Despite considerable progress since 1915, the large majority of hospital libraries are unprepared to assume a crucial role as "retail

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ABSTRACT

A research project which has as its objective the design, implementing and evaluation of educational programs for the purpose of upgrading hospital library practice is described. As a necessary preliminary to the formulation of educational objectives and the design of appropriate courses, a survey was made of hospital library facilities, resources, services, user groups, budgets and manpower in Ohio. The relationships between the library and the basic hospital functions of patient care, education and research were also investigated. Results are presented which indicate, in general, that Ohio hospital libraries are under-staffed and that collections, budgets and user services are minimal. Of a total of 227 libraries, 154 (67%) were classified as functional. Minimal service appears to generate small demands on libraries which in turn perpetuate minimal service.

To upgrade existing manpower, and to train new library personnel, a series of courses, the first being in Inter-Library Loan Procedures, is being designed and tested. For the purpose of gaining further insight into the attitudes and expectations of key hospital personnel such as Administrators, Directors of Medical Education, Chiefs of Medical Staff, Directors of Nursing Education, several hundred interviews are presently being conducted in hospitals in the Northeast Ohio Regional Medical Program.



outlets" in national and regional medical information networks; indeed, most persons employed in hospital libraries are unaware of these programs and of the roles they will be required to assume.

The existence of trained hospital library manpower is a critical factor in network development. Unsystematic and uncoordinated activity in individual hospital libraries must be formalized as regional medical library configurations develop. The hospital librarian is being forced to understand the nature of the interface between hospital and regional resources and is being compelled to standardize operations in order to conform to regional policies and procedures concerning interlibrary loan and other services. Successful access to, and exploitation of, regional and national library resources necessitates a knowledge of system coupling.

As demands are placed upon the hospital librarian by regional medical library developments, so demands placed upon the librarian within the hospital become more complex and urgent. The expansion of patient care services, training programs and research activity has produced an increasing pressure upon the hospital library. The continuing education of physicians, which is now of prime importance in the hospital setting, is but one hospital activity generating a need for high quality library services.

Study of the problem of educating hospital librarians to assume a more active role in the hospital setting commenced



several years ago at the Case Western Reserve University Center for Documentation and Communication Research. The objective of the research has been to design, implement and evaluate educational programs intended to upgrade hospital library practice in Ohio. Emphasis is placed upon the development and evaluation of courses relevant to present and projected hospital library practice.

II. Research Design

A. General Approach

It was immediately obvious that the almost total lack of data with respect to the current activities of Ohio hospital libraries precluded the immediate formulation of educational objectives in relation to hospital library personnel. It was clearly not possible to design educational programs in vacuo. First, it was necessary to define whom we were endeavoring to educate for what tasks, and to understand in detail the library environment in which personnel operate. Consequently, considerable effort was expended in the exploration and analysis of the current status of hospital library practice in Ohio with respect to the distribution of hospital library facilities, resources and services, the number of library personnel, the extent of their formal training, and their work experience.

The survey effort undertaken has resulted in:

(i) An identification of the total population of medical libraries in Ohio hospitals.



- (ii) A description of these hospitals in terms of patient care programs (facilities, organized medical services, outpatient clinics, hospital personnel); educational programs (internships, residencies, paramedical training programs); and research programs (extent and nature of research activity.
- (iii) A descriptive analysis of facilities, services, organizational structure and manpower of functional hospital libraries.

A description of the methodology used in this survey effort and a summary of findings and conclusions are presented below. Supporting data are included in a series of Reports.*

B. Basic Assumptions

For this study, the hospital was conceptualized as a system whose three major functions--patient care, education and research--are considered to be separate but constantly interacting. The hospital medical library is considered to



^{*} Rees, Alan M. and Lesliebeth Rothenberg.
Interim Report 1, Feasibility Study for Continuing Education of Medical Librarians, January 15, 1968, 66 p. (PB 179885)
Interim Report 2, Education for Hospital Library Personnel,
July 16, 1968, 90 p. (PB 179471)
Interim Report 3, Hospital Library Planning Data for the
Northeastern Ohio Regional Medical Program, August 1, 1968,
65 p. (PB 179886)

Available at \$3.00 per copy from Clearinghouse, Springfield, Virginia 22151, giving accession numbers noted.

be a component of this system. Its function is to provide information as an input to patient care, education and research, and to act as a clearinghouse for information being exchanged among persons engaged in these basic activities. Information is defined here in its broadest context and includes the use of recorded knowledge and audiovisual media, and it is assumed that the library's contribution to each of the hospital functions is of fundamental significance.

In addition to acting as an in-house agency for the efficient exchange of recorded and audiovisual information, the hospital library is assumed to provide the vital link between hospital staff and the rest of the biomedical communication network--local, regional, national and world-wide.

This conceptualization of the library's role within the hospital and within the pattern of information exchange of the biomedical community has definite implications for the development of the library and for the education of its manpower. It challenges both the archival role of the library and the traditional education of librarians. In order to meet this challenge, and to provide new guidelines for the development of hospital libraries and for the education of appropriate personnel, the interaction of the various hospital functions with each other and with the library were investigated. Thus, the research undertaken has been concerned not only with library resources, services



and manpower, but also with the relationships (both actual and potential) between the hospital library and the basic hospital functions of patient care, education and research.

C. Survey Population

The survey population consisted of all Ohio institutions meeting the Ohio Department of Health definition of a hospital and having a medical library. Institutions to be included were identified on the basis of records maintained by the State, and other information obtained through a brief fixed-alternative questionnaire directed to each hospital administrator.

Of the 297 hospitals in Ohio, 227 were found to have medical libraries meeting at least one of four criteria based on hospital accreditation, library personnel, and funding. Of these 227 hospitals, 73 (47%) support at least one formally organized educational program, 107 (56%) conduct continuing education programs, and 47 (21%) report research activity.

D. Survey Instruments

Two questionnaires were devised to gather information about the hospital libraries. The Medical Library Questionnaire was directed to the person previously identified by the hospital administrator as being in charge of the library.

^{*} For data and detailed analysis, see Report No. 2.



Data were solicited relating to library personnel, budget, resources, and services, and departmental libraries, as well as to the structure composition and function of the library committee. An 80% return was achieved. The Medical Librarian Questionnaire was then directed to each salaried person identified by the librarian-in-charge as spending any part of his effort in performing library tasks, since these persons are considered to be the prime potential audience for any educational program to be created. Of 212 persons, 40% (84 from 71 libraries) returned this question-naire.

E. Classification of Hospital Libraries

Hospital libraries in the survey population were divided into several classes based on data relating to manpower. A classification scheme based upon considerations of manpower was chosen so that the entire population of libraries could be ordered on the basis of degree of activity. It was assumed that libraries having full-time personnel are more active, provide more services on a regular basis, than libraries having only part-time personnel. Initially the libraries were divided into two groups: libraries in which someone was employed to perform library tasks (functional libraries) and libraries in which administrative and other staff personnel were nominally responsible for the library, with no one actually performing library tasks (non-functional libraries). One hundred and fifty-four libraries (67% of the



total) were classified as <u>functional</u> by this distinction. (Figure 1) An active research program within a hospital appears to exert a stronger influence than do training programs in determining whether or not that hospital's library will be functional. Ohio hospitals of all sizes having both research and training programs almost always have functional libraries.

Functional libraries were then reclassified on the basis of the number of hours devoted to library work by library personnel, on the assumption that this criterion could be used as a gross indicator of the level of library service. The functional libraries in the survey population were divided into two groups: Active Functional Libraries were defined as those receiving 20 or more man-hours of personnel time per week, and Minimal Functional Libraries as those receiving less than 20. By this definition, 47 Ohio hospital libraries (31% of the functional libraries and 21% of the total survey population) were found to be (Figure 2) Again, the co-occurrence of research Active. and teaching programs seemed to influence most strongly the likelihood of a hospital's library being active."

III. Results

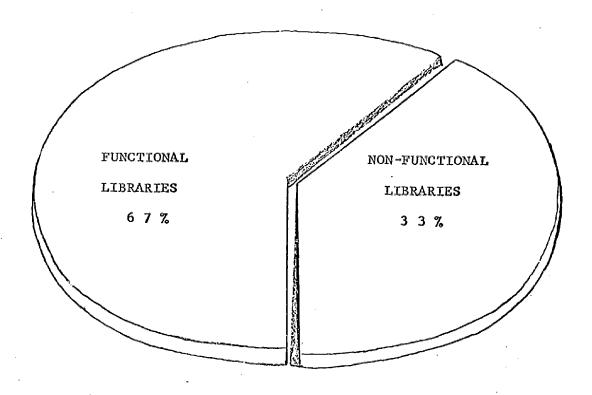
Data derived from the several questionnaires are presented

^{*} Although bed size directly affects both the probability of a hospital's having educational and research programs and the likelihood of its having a library, the data cited here were compiled by bed increments and therefore compare only institutions of similar size.



Figure 1
HOSPITAL LIBRARIES IN OHIO

N = 227



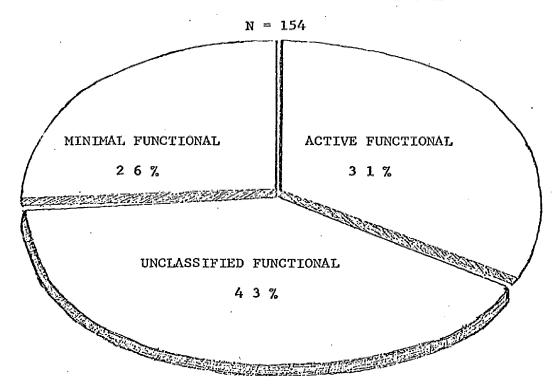
Definitions:

- 1. Functional Libraries are considered to be those which report persons employed to perform library tasks.
- 2. Non-Functional Libraries are considered to be those which report administrative persons as being responsible for the library, but report no persons employed to perform library tasks.



Figure 2

DESCRIPTION OF FUNCTIONAL LIBRARIES
IN OHIO
BY HOURS LIBRARIAN SPENDS IN LIBRARY



Definitions:

- 1. Active Functional Libraries are characterized by the librarian reporting 20 or more hours per week performing library tasks.
- 2. Minimal Functional Libraries are characterized by the librarian reporting less than 20 hours per week performing library tasks.
- 3. Unclassified Functional Libraries are functional libraries which could not be assigned to the active or minimal groups because of missing data.



below in six major categories: A) Characteristics of library personnel; B) Budget; C) Library collections; D) Departmental book collections; E) Library services; and F) Library Committees.

A. Characteristics of Library Personnel

1. Education

Of the 86 librarians-in-charge who completed this item on the Medical Library Questionnaire only 13 (11%) hold library degrees at the bachelor's or master's level, while 25 others (20%) hold bachelor's or master's degrees in fields other than library science. Of these 38 college graduates (31% of those reporting), 24 majored in one of the physical sciences.

Persons with library degrees reported little or no on-the-job training in the hospital library. Others indicated that they were trained by their predecessors, presumably in "how the work is done here." In order of frequency the major subject areas for on-the-job training were:

- 1. Maintaining the collection
- 2. Cataloging
- 3. General Reference
- 4. Circulation
- 5. Purchasing materials

Though a small group of librarians have taken advantage of programs designed to up-date their education, the data showed that the majority of persons providing



library service in Ohio hospitals have had no library education whatsoever, either basic or continuing. The many workshops sponsored by the Medical Library Association, the American Hospital Association and the Catholic Hospital Association appear to be attended mainly by persons with library degrees.*

2. Personal and Employment History

Data relating to age, number of years in present position, and jobs prior to present position by subjects' educational attainment are summarized in Table 1. The median age for all 84 respondents was approximately 40 years; for persons with bachelor's and library degrees it was 34. When these data are taken together with the average length of time spent in the present position (5 years) and the average number of jobs held during the past ten years (1.1), a pattern of stability in employment emerges.

It is interesting to note that of the 66 respondents who do not hold library degrees, only 13 reported some prior employment in libraries; 24 had worked in Medical Records departments, and 21 had clerical experience. Of the 18 professionally trained librarians, only 4 reported any previous work experience in medical libraries. It



^{*} A separate study of attendees at the 1968 MLA continuing education courses has led to the same conclusion. Results of this investigation will be published in the near future.

Table 1

Personal History Data

Age and Job History by Educational Attainment

N = 84

Levels of Academic Achievement	Median Age of Respondents	Years in	Mean Number of Positions During Last 10 Years
High School	38	5₹	1.1
Business School or Vocational Training	47	5½ 5½	1.1 1.1
BA or BS	34	5≹	1.1
MA or MS	48.		
Library Degree	34	6	1.4
		1	

is clear that most of the persons employed in hospital libraries were not specially trained for this type of work, and few had the benefit of relevant library experience.

3. Library Effort

The number of hours per week, per person, devoted to library activities ranged from one hour to 40, with a mean of 22.* The curve was sharply skewed to the low end of the range, with 45% of the respondents indicating less than 10 hours per week devoted to library activities. All respondents with library degrees were full time, as were most of those holding bachelor's and master's degrees in other fields.

Almost 50% of the non-library responsibilities reported by part-time personnel were in medical records, and it should be noted that at the present time, educational preparation for medical records work requires either a four-year college course leading to a baccalaureate degree in Medical Record Library Science or two years of college plus a one-year approved hospital course in Medical Record Library Science.

B. Budget

Information about sources and levels of financial support,



^{*} The distinction between Active Functional and Minimal Functional libraries, based on 20 man-hours per week and described above, was derived from these data.

especially when combined with personnel data, may be seen as an indicator of the level of library service as well as the status of the library within the hospital structure. The sources of funds reported by 73% of the functional libraries in Ohio are shown in Table 2. The large majority (53%) of these libraries are supported by hospital funds only or by a combination of hospital funds and staff dues. Seventy percent of those libraries with full-time librarians are supported in this manner.

Table 3 summarizes 1966-1967 expenditures (by budget categories) reported by 83 of the functional libraries in Ohio. Although these data are incomplete and based on estimates, they do provide some insight into levels of funding. As might be expected, libraries having full-time librarians tend to have larger budgets than those with only part-time librarians, regardless of the source of funds. However, the conclusion is inescapable that most hospital libraries in Ohio are both under-staffed and under-funded. Both of these factors exert a very real influence upon the level and the nature of library collections and services, and upon the position of the librarian within the hospital organization.

C. Library Collections

Collection statistics were requested for 1965, 1966, and 1967, in order to identify a growth pattern which could serve as the basis for prediction of collection size and thus



Table 2

Source of Funding for Functional

Hospital Libraries in Ohio

N = 123

SOURCE OF FUNDING	DISTRI	BUTION
	Frequency	Percent
General Hospital Funds only	24	20
Staff Dues only	12	10
Hospital Funds and Staff Dues	28	23
Hospital Funds and Staff Dues, and Hospital Auxiliary	.	4
Hospital Funds and Hospital Auxiliary Funds and "other"	3	2
Not Given	50	41
TOTAL:	123	100

Table 3

Total Reported Expenditures for

Responding Functional Hospital Libraries, 1966-1967

-17~

Budget Category	Total Report- ed Expendi- tures I	Average Total/N II	Average Expen- ditures in Libraries with Full-time Librarians III
Salaries	\$415,603.00	\$ 7,992.00	\$ 9,410.00
Books	97,775.00	1,177.00	1,986.00
Journals	107,830.00	1,477.00	2,426.00
Bindings & Collection Maintenance	36,958.00	672.00	850.00
A-V Materials and Equipment	3,751.00	250.00	359.00
Membership Fees	3,778.00	105.00	42.00
Interlibrary Loan Fees	310.00	34.00	28.00
Photocopy	7,772.00	554.00	621.00
Library Supplies	17,036.00	340.00	313,00
Travel	3,300.00	236.00	216.00
TOTAL:	\$694,113.00	\$ 8,363.00	\$15,208.00

certain financial needs of the future in relation to both intra-hospital and inter-hospital demands. However, the data proved insufficient for this purpose.

The data received is summarized in Table 4. Again, the 36 hospitals with full-time librarians account for the major portion of the holdings in almost every category, the exceptions being A-V materials and equipment. This finding seems to indicate that these materials can be acquired, maintained, and utilized with no significant investment in library manpower, though it says nothing about A-V specialists who might be employed elsewhere in the hospital.

D. Departmental Book Collections

The information gathered suggests that departmental book collections are rarely coordinated with, or administered by, the central library, but that they serve the specialized and immediate needs of the departments on an informal demand basis.

Of the 123 institutions responding to a Yes-No question concerning the existence of departmental book collections, 58 stated that there were none in their hospitals. A total of 150 collections were reported; 62% of them in Pathology, X-ray, Nursing and Research departments. (Figure 3)

There appears to be no correlation between the occurrence of departmental collections and hospital bed size, or between the occurrence of departmental collections and the level of services offered by the central library. It may be assumed,

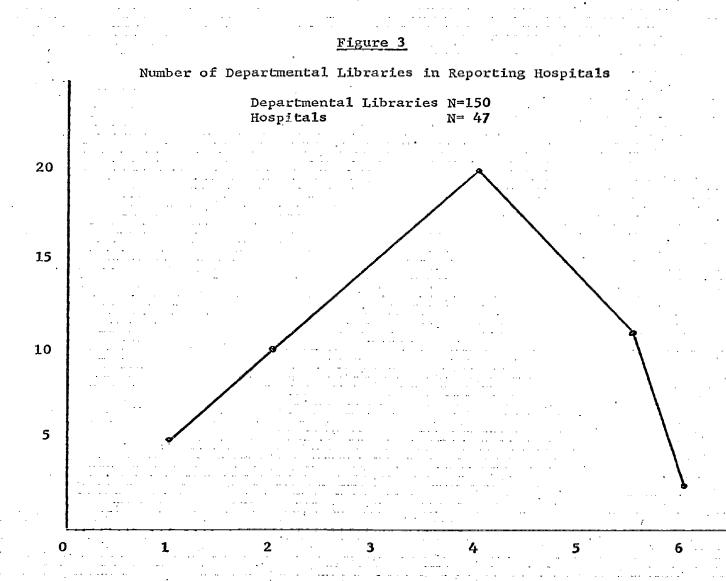


Collection of Statistics for Responding Functional Libraries, 1967

	All Repor	All Reporting Libraries	នួ	Reporting Libraries With Full-Time Librarians	braries Wit	h	ı
Categories	Summated	-3		Summated	-		
	Holdings	Average"	Range	Holdings	Average	Range	-
Books: texts, general reference	101,460	1,103	12- 6,710	76,906	2,330	415- 6,710	,
Journals .	93,652	1,128	4-15,000	77,145	2,337	25-15,000	
Pamphlets, preprint, reprints	988,9	225	10- 1,950	6,225	519	75- 1,950	
Indexing & Abstracting literature	2,697	57	1-704	2,217	68	1-704	
A-V materials	10,177	275	1- 2,120	3,712	. 206	5-840	
A-V equipment	95	ო	1-15	87	4	1-14	
			,	an Talahan da Andria	•		

The figures were obtained by dividing the summated holdings by the number of libraries reporting in each category.





DEPARTMENTAL LIBRARIES

however, that the nature and use of departmental collections are affected by such factors.

Seventeen respondents indicated that central library funds were used to support departmental collections; one reported allocating 10% of its book and journal funds to this purpose. The central library handles departmental book purchases in 30 (46%) of the hospitals, and maintains cards for departmental holdings in the central library catalog in 24 (37%).

E. Library Services

Both services and demands were found to be greater in libraries having full-time librarians than in those without. The questionnaire listed fourteen library services, and respondents were asked to indicate whether or not their libraries offered these services, and to rate the demand for each as Heavy, Moderate, or Light. More than half of the libraries reporting lend books and unbound journals; just under half lend bound journals.

The demand for loan of books was rated heavy by 40% of the librarians reporting, and for loan of bound and unbound journals by 33%. Quick reference service was offered by 46% of these libraries, but demand for this service was most often rated moderate. Interlibrary loan was offered by 44%, but the demand was light. Photocopy service was offered by 42%, and the demand was moderate. Other services were offered by less than 40% of the libraries reporting, and

the demand for them was generally rated moderate or light.

These data appear to indicate a direct relationship between service and demand, perhaps a circular one in which each generates the other. A few hospitals indicated some slight demand for services which were not offered. On the other hand, in many instances demand for services offered was not great, a fact which suggests that publicity about the library and its services has not reached large numbers of hospital personnel, or that certain services are provided only on request.

The library personnel were asked to estimate use of the hospital library by sixteen categories of hospital personnel representing various aspects of patient care, education and research activities. Attending staff, residents and interns seemed to make the heaviest use of the library, followed by nursing staff, courtesy staff, administrative personnel and research personnel. The nature of the information demands and needs of these groups is currently being studied in another phase of this research.

Though certain activities (such as interlibrary loan) require the presence of library personnel at some time, unaided access to the collection may also be considered to be a form of library service. Of the 100 functional libraries reporting, 32 were open only with an attendant, and 12 of these had full-time librarians. The number of

hours open per week ranged from 22 to 107, and in many instances keys were available to certain hospital personnel when the library was officially closed. Two libraries could be used only if the patron secured a key, but in 24 hospitals the library was open 9 3/4 to 168 hours each week, part of the time with an attendant (14-88 hours) and the remainder without. In the majority of these cases, too, keys were required when there was no attendant.

F. Library Committees

Most hospital library committees were found to be composed entirely of attending staff physicians, with no clear indication that their medical specialties affected their selection. Sixteen different specialties were cited, four--internal medicine, surgery, obstetrics, and pathology --more frequently than the others. Half of the librarians reporting were members of the library committees or attended their meetings; however, the librarian's role in relation to the library committee was not clear. This problem is being investigated through interviews, as are the attitudes of committee members toward their committee responsibilities, the library, and the librarian.

A majority of the librarians reported that they received instructions from the library committee concerning acquisitions, circulation, and service policies. However, in view of other data indicating that the committees tend to meet neither frequently nor regularly, it is likely that much of the active,

continuing decision-making falls to the administrator and/or the librarian.

Dual responsibility exists in that the hospital librarian is responsible to one authority (the committee) in professional matters and to another (the hospital administration) in operational matters. Given a strong, positive, and experienced individual, this situation could serve to enhance the position of the librarian.

IV. Discussion

Despite the incomplete and tentative nature of the data reported above, it is possible to gain an empirically-based insight into the operational situation of these hospital libraries. In the main, this situation is neither happy nor encouraging—minimum manpower appears to be the complement of minimum budgets, collections, and services. Furthermore, major decisions affecting the library are made by persons having little insight into the role which the library should play within the hospital environment.

Yet it is these same libraries which must constitute the component nodes of an information exchange network. Regional Medical programs as well as Regional Medical Library programs are generating a need for high quality library service, and the hospital with no library, or with a poor one, will do its physicians, professional staff and patients a severe disservice.

Although this study was limited to Ohio, there is no reason to believe that this situation is atypical of that existing in the nation. Therefore, the implications of these data are



of concern to those engaged in planning and implementing medical information systems. Given the conditions described, and the fact that plans for the dissemination of current information to health sciences personnel are based upon utilization of regional and national medical information resources by the persons manning libraries in the nation's hospitals, it is evident that course offerings must be designed and implemented to assist hospital librarians in assuming a more active role both in their own institutions and in relation to regional and national library resources.

As a first step in this direction, a course in
Interlibrary Loan procedures has been prepared and is being
offered to several groups of hospital librarians in Ohio
and neighboring states.* It is designed to provide basic
rather than continuing education, and its effectiveness will be
measured in terms of before-and-after practice as another
phase of this research project. This course will be followed
by others in several areas relating to hospital library practice.

It seems clear that the potential audience for such courses is not now availing itself of existing continuing education programs, presumably because its need is for <u>basic</u> library training rather than updating of previous library education.

Its employment history suggests that it is a stable group of white-collar workers who have the potential for success in short courses and the ability to apply new knowledge to their

^{*} The course manual is available on request from the authors.

working situations. Thus the employers' investment in these persons could be expected to yield both immediate and long-range benefits through improved library services to their hospitals, to the nation's physicians, and to the many other professional people engaged in basic hospital functions.

V. Future Effort

Emphasis is being placed upon the design, implementation and development of a series of courses relevant to hospital library practice, to be offered in conjunction with Regional Medical Libraries and Regional Medical Programs. In addition to Interlibrary Loan Procedures, several other courses are in the planning stage.

Since the context of hospital library practice is rapidly changing and becoming more complex in nature, a parallel research study has commenced to investigate the structural and functional role of the library within the hospital system. Considerable progress has been made in the design of an investigation which will provide a dynamic perspective to the analysis of the interactions between the library and the hospital's patient care, education and research functions. Of particular interest are the perception and evaluation by library users of current library resources and services; the conception of library users of the need for various library resources and services in terms of their professional roles in the hospital; use of the library as contrasted to the use of verbal inter-personal communication in obtaining information; attitudes toward library resources and

services on the part of non-users; and identification of alternative sources of information.

Several hundred persons in Oi.io hospitals (Administrators, Directors of Medical Education, Chiefs of Medical Staffs, Directors of Nursing Education), are presently being interviewed to determine their attitudes and expectations towards library-based information services. The insights gained as a result of these interviews will probably be most useful in the training of hospital library manpower.

